

Monitoring Question

Are mineral exploration, development, and production avoidance or mitigation measures effective and being followed as recommended ?

Monitoring Conducted

Exploration

Forest Plan Desired Condition D-MN-1 Exploration and development of mineral and mineral material resources is allowed on NFS land except for federally owned minerals in designated Wilderness (BWCAW) and the Mining Protection Area (MPA). **D-MN-2** Ensure that exploring, developing, and producing mineral resources are conducted in an environmentally sound manner so that they may contribute to economic growth and national defense.

Federal Hardrock Mineral Exploration - The Bureau of Land Management (BLM) is the responsible agency for permitting and administration. The SNF assists them in administration and monitoring and notifies the BLM when there are permit issues. Three new approved exploration plans of operations and four active plans of operations were monitored as needed for compliance with the approved plan of operations and Forest Plan. Operations were found to be in compliance and no notices of noncompliance were issued. No new permanent roads were constructed. There was 0.2 miles of temporary access roads constructed that were bonded for reclamation and closed at the end of the activities. Monitoring has shown that closure is effective since no post-reclamation vehicle issues developed and no surface disturbance is seen.

Federal Hardrock Mineral Prospecting Permits and Leases:

Prospecting permits give a company the right to explore for leas able mineral deposits on lands where the BLM and Forest Service has determined that prospecting (mineral exploration) is needed to determine the existence of a valuable deposit.

Leases are issued to provide a company the opportunity to demonstrate the discovery of a valuable deposit of the leas able mineral. A lease gives a company the right to explore, develop a mine and produce a valuable mineral product. The following lease and permit activity occurred in 2006:

- Prospecting Permit Applications: 25
- Prospecting Permits - Permitted: 5 (12,083 acres)
- Prospecting Permits - Expired: 3
- Prospecting Permits - Relinquished: 9
- Hardrock Mineral Leases - Administered: 2 (4,945 acres)

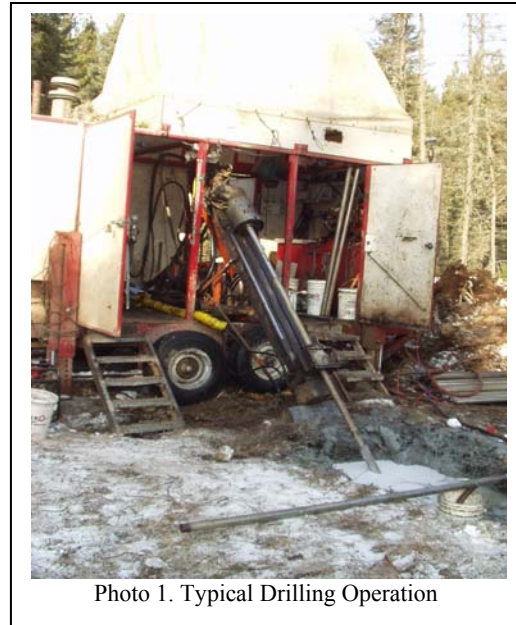


Photo 1. Typical Drilling Operation

Private Minerals - The SNF approved and monitored three private mineral exploration plans of operations for compliance with approved and negotiated mitigation and reclamation requirements. The companies implemented their operating plans and no compliance issues were identified.

Development

No mines were permitted in 2006.

Production

There are three active large mineral material contracts on the SNF. Two contracts are for granite and one contract is for sand and gravel. Monitoring of mineral material production is on-going through the year when the operations are active. Monitoring focused on permit and Forest Plan compliance. At least 20 monitoring site visits were completed. No non-compliance issues were found and no resources issues were identified.

Granite: Two granite quarries were in production under mineral material contracts with Coldspring Granite Company, the Black Quarry and Green Quarry. Production is measured in tons (below). A total of 9,612 tons were sold for a total of \$90,330.

Black Granite.....7,979 tons @ \$73,828

Green Granite..... 1,633 tons @ \$16,502



Photo 2. Coldspring Granite Company Black Granite Quarry. Kawishiwi Ranger District

Sand and Gravel: The SNF continues to sell sand and gravel to the public and companies. Seppi Brothers Concrete Products Corp. buy the most mineral materials and have an active mineral material contract. Free use is given to counties and other non-profit entities as requested. Small material sales are issued to the public. The SNF continues to utilize mineral materials from over 60 administrative mineral material quarries for road maintenance, construction and other projects.

Production and sales are listed below. A total of 196,121 tons were sold at \$48,663. The SNF utilized \$5,149 worth of material.

Private Sales and Free Use:	301 tons	@ \$204
Seppi:	113,072 tons	@ \$48,459
SNF Use:	7,588 tons	@ \$5,149

Restoration

Reclamation of exploration projects is completed after the projects are completed and drill boreholes are permanently abandoned. Reclamation was monitored for some of the projects. Road closures were completed and appear to be effective at keeping motorized vehicles off of reclaimed/closed access routes. The companies continue to keep some drill boreholes temporarily abandoned in accordance with Minnesota state regulations.



Photo 3. Flintlock Mineral Material Pit. Gunflint Ranger District

Evaluation and Conclusions

Exploration, Development, Production, Restoration

The SNF is complying with the Forest Plan as it relates to mineral and geology resource management. Monitoring site visits during active exploration projects have shown that companies are implementing their project in accordance with their plan of operations. No notices of non-compliance were issued. However, further monitoring is needed for reclamation effectiveness after the projects are completed. This should help the SNF develop a better understanding of what measures are effective and what additional measures are needed to protect surface resources. Further monitoring will be required when companies propose to permanently abandon their drill boreholes.

Standards and Guidelines

Forest Plan Standards and Guidelines apply to federal and non-federal minerals outside and inside the BWCAW and Mining Protection Area. The Standards and Guidelines address permitting (S-MN-1 through S-MN-11, Forest Plan pp. 2-9 to 2-10), mitigation to protect surface resources (S-MN-12 and 13, Forest Plan p. 2-10), and reclamation (G-MN-1, Forest Plan p. 2-10). All applicable Forest Plan direction was followed successfully. Private reserved minerals have Secretary of Agriculture Rules and Regulations associated with the warranty deed that must be followed. The SNF negotiates mitigation for private outstanding minerals. See the Forest Plan for a complete list of Standard and Guidelines.

Necessary Follow-up Actions and Management Recommendations

At this time, the need for management changes or Forest Plan amendments for mineral and geology resources have not been identified or planned. However two Management Recommendations are suggested as follows.

- ✱ A framework for managing/administering federal hardrock minerals with the BLM would be beneficial to improve the permitting and administration process and to guide how the two agencies cooperatively work together.
- ✱ The SNF should develop a policy on how the National Environmental Policy Act applies to private reserved and outstanding mineral proposals.

Collaborative Opportunities To Improve Efficiency And Quality Of Program

Partnerships

The BLM is the agency responsible for federal hardrock mineral exploration proposals, prospecting permits and leases. The Forest Service works cooperatively with the BLM on permitting and administration of federal hardrock mineral projects and is the lead agency for the project permitting environmental analysis process. The BLM is the lead agency for compliance. However, the Forest Service assists the BLM by completing project compliance inspections and works with the BLM to resolve compliance issues.

The SNF is cooperating with the Minnesota DNR and Army Corps of Engineers on PolyMet Mining Inc.'s NorthMet Mine permitting project under a memorandum of understanding. All three agencies are involved in an EIS analysis and permitting.

Research

Research information generated by the Minnesota Geological Survey and universities may be published that can assist the SNF in managing minerals and geology. As the opportunities arise, research may be integrated into the minerals and geology program. The SNF did not contribute to new mineral or geology research projects in 2006.

Summary Findings

- ✧ Federal mineral operations, which are permitted and administered by the Bureau of Land Management, were found to be in compliance and no notices of noncompliance were issued.
- ✧ The following are permit applications, expirations, and relinquishments accomplished in 2006:
 - 25 prospecting permit applications were received
 - 5 prospecting permits were issued encompassing 12,083 acres
 - 3 prospecting permits expired
 - 9 prospecting Permits were relinquished by the companies
 - 2 Hardrock Mineral leases on 4,945 acres were administered
- ✧ A total of 9,612 tons of granite from two quarries were sold for \$90,330.
- ✧ A total of 196,121 tons of sand and gravel were sold for \$48,663.
- ✧ A total of 7,588 tons of mineral materials were utilized by the SNF for administrative purposes for a total value of \$5,149.
- ✧ A framework for managing federal hardrock minerals with the BLM would be beneficial to improve the permitting process and to help guide how the two agencies cooperatively work together.